

O'Bryen, Barbara

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From: Chan, Christina  
Sent: Friday, March 08, 2002 12:51 PM  
To: Zhou, Shubo (AU1631); O'Bryen, Barbara  
Subject: RE: RUSH search approval

**Please rush. Thanks Chris**

-----Original Message-----

Fr m: Zhou, Shubo (AU1631)  
Sent: Friday, March 08, 2002 12:49 PM  
T : Chan, Christina  
Subject: RUSH search approval

Hi Chris,

I'd appreciate your approval for a RUSH search. Also, please just email back to me and I'll email it to Barb Obryen.

09/198,779

Registry search

Enzyme name: Methionine Adenosyltransferase

plant names: maize or soybean

Thanks,

Joe

Shubo "Joe" Zhou, Ph.D.  
Patent Examiner  
(703)-605-1158, CM1/12B03  
AU 1631, US PTO

Point of Contact:  
Barb O'Bryen  
Technical Information Specialist  
STIC CM1 6A05 308-4291

SOB  
3-8-02

herbicide  
pesticide

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**O'Bryen, Barbara**

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**From:** Zhou, Shubo (AU1631)  
**Sent:** Friday, March 08, 2002 12:46 PM  
**To:** O'Bryen, Barbara

Thanks Barb, here are the info.

09/198,779

To see if there are sequences (protein and DNA) for maize or sybeen enzyme Methionine Adenosyltransferase

either a registry search or any other search.

Joe

*Shubo "Joe" Zhou, Ph.D.*  
Patent Examiner  
(703)-605-1158, CM1/12B03  
AU 1631, US PTO

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=> fil reg

FILE 'REGISTRY' ENTERED AT 14:46:46 ON 08 MAR 2002  
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STRUCTURE FILE UPDATES: 6 MAR 2002 HIGHEST RN 398994-63-3  
DICTIONARY FILE UPDATES: 6 MAR 2002 HIGHEST RN 398994-63-3

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES  
for more information. See STNote 27, Searching Properties in the CAS  
Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

The P indicator for Preparations was not generated for all of the  
CAS Registry Numbers that were added to the H/Z/CA/CAplus files between  
12/27/01 and 1/23/02. Use of the P indicator in online and SDI searches  
during this period, either directly appended to a CAS Registry Number  
or by qualifying an L-number with /P, may have yielded incomplete results.  
As of 1/23/02, the situation has been resolved. Also, note that searches  
conducted using the PREP role indicator were not affected.

Customers running searches and/or SDIs in the H/Z/CA/CAplus files  
incorporating CAS Registry Numbers with the P indicator between 12/27/01  
and 1/23/02, are encouraged to re-run these strategies. Contact the  
CAS Help Desk at 1-800-848-6533 in North America or 1-614-447-3698,  
worldwide, or send an e-mail to [help@cas.org](mailto:help@cas.org) for further assistance or to  
receive a credit for any duplicate searches.

=> e methionine adenosyltransferase/cn

E1	1	METHIONINE .GAMMA.-LYASE (TRICHOMONAS VAGINALIS GENE MGL2 SU BUNIT)/CN
E2	1	METHIONINE 2,2,2-TRICHLOROETHYL ESTER/CN
E3	1	--> METHIONINE ADENOSYLTRANSFERASE/CN
E4	1	METHIONINE ADENOSYLTRANSFERASE (PSEUDOMONAS AERUGINOSA STRAI N PA01 GENE METK)/CN
E5	1	METHIONINE ADENOSYLTRANSFERASE (XYLELLA FASTIDIOSA GENE XF03 92)/CN
E6	1	METHIONINE ADENOSYLTRANSFERASE 1 (ADOMET SYNTHETASE); METHYL AND PROPYLAMINE DONOR, COREPRESSOR OF MET GENES (ESCHERICHIA COLI O157:H7 STRAIN EDL933 GENE METK)/CN
E7	1	METHIONINE ADENOSYLTRANSFERASE 1 (ESCHERICHIA COLI STRAIN O1 57:H7 GENE ECS3818)/CN
E8	1	METHIONINE AMINO PEPTIDASE MPN186 (MYCOPLASMA PNEUMONIAE STR AIN M129 GENE MAP)/CN
E9	1	METHIONINE AMINOPEPTIDASE/CN
E10	1	METHIONINE AMINOPEPTIDASE (ARABIDOPSIS THALIANA CLONE T6J4 G ENE T6J4.3)/CN
E11	1	METHIONINE AMINOPEPTIDASE (ARABIDOPSIS THALIANA GENE AT2G441 80)/CN
E12	1	METHIONINE AMINOPEPTIDASE (ARABIDOPSIS THALIANA GENE AT2G452 40)/CN

*none  
specifically  
from  
corn or  
soy beans*

=> s e3

L11 1 "METHIONINE ADENOSYLTRANSFERASE"/CN

=> d ide

L11 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN 9012-52-6 REGISTRY

CN Adenosyltransferase, methionine (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Adenosylmethionine synthetase

CN ATP-methionine adenosyltransferase

CN ATP:L-methionine-S-adenosyltransferase

CN E.C. 2.4.2.13

CN E.C. 2.5.1.6

CN **Methionine adenosyltransferase**

CN Methionine S-adenosyltransferase

CN Methionine-activating enzyme

CN S-Adenosyl-L-methionine synthetase

CN S-Adenosylmethionine synthase

CN S-Adenosylmethionine synthetase

MF Unspecified

CI MAN

LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA,  
CAPLUS, CASREACT, CEN, EMBASE, TOXCENTER, USPATFULL

*sequence not available*

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

620 REFERENCES IN FILE CA (1967 TO DATE)

6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

620 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> e methionine adenosyl transferase/cn

E1 1 METHIONINE .GAMMA.-LYASE (TRICHOMONAS VAGINALIS GENE MGL2 SU  
BUNIT)/CN

E2 1 METHIONINE 2,2,2-TRICHLOROETHYL ESTER/CN

E3 0 --> METHIONINE ADENOSYL TRANSFERASE/CN

E4 1 METHIONINE ADENOSYLTRANSFERASE/CN

E5 1 METHIONINE ADENOSYLTRANSFERASE (PSEUDOMONAS AERUGINOSA STRAI  
N PAO1 GENE METK)/CN

E6 1 METHIONINE ADENOSYLTRANSFERASE (XYLELLA FASTIDIOSA GENE XF03  
92)/CN

E7 1 METHIONINE ADENOSYLTRANSFERASE 1 (ADOMET SYNTHETASE); METHYL  
AND PROPYLAMINE DONOR, COREPRESSOR OF MET GENES (ESCHERICHI  
A COLI O157:H7 STRAIN EDL933 GENE METK)/CN

E8 1 METHIONINE ADENOSYLTRANSFERASE 1 (ESCHERICHIA COLI STRAIN O1  
57:H7 GENE ECS3818)/CN

E9 1 METHIONINE AMINO PEPTIDASE MPN186 (MYCOPLASMA PNEUMONIAE STR  
AIN M129 GENE MAP)/CN

E10 1 METHIONINE AMINOPEPTIDASE/CN

E11 1 METHIONINE AMINOPEPTIDASE (ARABIDOPSIS THALIANA CLONE T6J4 G  
ENE T6J4.3)/CN

E12 1 METHIONINE AMINOPEPTIDASE (ARABIDOPSIS THALIANA GENE AT2G441  
80)/CN

=> fil agricola medline caba capl biosis jic scisearch toxcenter  
FILE 'AGRICOLA' ENTERED AT 14:52:00 ON 08 MAR 2002

FILE 'MEDLINE' ENTERED AT 14:52:00 ON 08 MAR 2002

FILE 'CABA' ENTERED AT 14:52:00 ON 08 MAR 2002  
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=> d que 15; d que 19; d que 113; d que 114; s 15 or 19 or 113  
L2 1648 SEA (METHIONINE(W) (ADENOSYL TRANSFERASE# OR ADENOSYLTRANSFERASE  
#))  
L3 809821 SEA (CORN OR MAIZE OR SOYBEAN# OR SOY BEAN# OR GLYCINE(W) MAX)  
L4 2551751 SEA SEQUENC?  
L5 2 SEA L2 AND L3 AND L4

L2 1648 SEA (METHIONINE(W) (ADENOSYL TRANSFERASE# OR ADENOSYLTRANSFERASE  
#))  
L3 809821 SEA (CORN OR MAIZE OR SOYBEAN# OR SOY BEAN# OR GLYCINE(W) MAX)  
L6 2870192 SEA DNA OR DEOXYRIBONUCL? OR DEOXY RIBONUCLEIC  
L7 8096324 SEA PROTEIN# OR PEPTIDE# OR AMINO ACID#  
L8 993374 SEA NUCLEOTIDE#  
L9 2 SEA L2(10A) L3 AND (L6 OR L7 OR L8)

L3 809821 SEA (CORN OR MAIZE OR SOYBEAN# OR SOY BEAN# OR GLYCINE(W) MAX)  
L4 2551751 SEA SEQUENC?  
L12 1313 SEA (ADENOSYLMETHIONINE OR ADENOSYL METHIONINE) (W) (SYNTHASE#  
OR SYNTHETASE#)  
L13 6 SEA L12 AND L3 AND L4

L3 809821 SEA (CORN OR MAIZE OR SOYBEAN# OR SOY BEAN# OR GLYCINE(W) MAX)  
L6 2870192 SEA DNA OR DEOXYRIBONUCL? OR DEOXY RIBONUCLEIC  
L7 8096324 SEA PROTEIN# OR PEPTIDE# OR AMINO ACID#  
L8 993374 SEA NUCLEOTIDE#  
L12 1313 SEA (ADENOSYLMETHIONINE OR ADENOSYL METHIONINE) (W) (SYNTHASE#  
OR SYNTHETASE#)

L14 0 SEA L12(10A) L3 AND (L6 OR L7 OR L8)

L15 8 L5 OR L9 OR L13

=> dup rem 115

PROCESSING COMPLETED FOR L15

L16 8 DUP REM L15 (0 DUPLICATES REMOVED)  
ANSWERS '1-5' FROM FILE CAPLUS  
ANSWER '6' FROM FILE BIOSIS  
ANSWERS '7-8' FROM FILE SCISEARCH

=> d ibib ab 116 1-8

L16 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 2001:101336 CAPLUS  
DOCUMENT NUMBER: 134:158478  
TITLE: Recombinant expression vectors for the modification of  
polyamine levels in plants  
INVENTOR(S): Barcelo-ensesa, Pilar; Tiburcio, Antonio F.  
PATENT ASSIGNEE(S): E.I. Dupont De Nemours and Company, USA; Dupont (Uk)  
Limited  
SOURCE: PCT Int. Appl., 57 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

*These are references  
as where you may find  
the sequence in the full-text  
article*

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001009358	A1	20010208	WO 2000-GB2871	20000728
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1117809	A1	20010725	EP 2000-948156	20000728
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			

PRIORITY APPLN. INFO.: GB 1999-17875 A 19990730  
WO 2000-GB2871 W 20000728

AB The invention provides a nucleic acid construct for transforming a plant cell, the construct comprising a promoter operatively linked to a nucleotide **sequence**, the promoter being selectively activated in cells of propagating material for a plant, the nucleotide **sequence** being such that its transcription leads to an alteration in the levels of polyamines produced in transformed cells of propagating material relative to untransformed cells. A gene encoding a protein involved in polyamine biosynthesis is introduced to a plant cell to affect alterations in the levels of polyamines produced. A redn. in the levels of polyamines produced in the transformed cell is effected by the expression of at least one corresponding antisense RNA or of at least one sense-RNA for achieving a co-suppression effect. A host cell, a transgenic plant cell, or plant obtained by regenerating transgenic plant cells, which has been transformed and/or genetically modified by a vector described, are claimed. Propagating material obtainable from the plants are claimed. A foodstuff obtainable from or contg. the propagating material are claimed.



A process for altering the levels of polyamines in a propagating material for a cultivated plant by transforming a plant cell with a vector as defined are claimed. The plasmid vector, pHMW-ADC(+), contg. the construct comprising the IDx5 promoter, isolated from the Glu-iD-1 gene from Triticea cv. Cheyenne, the oat arginine decarboxylase (ADC) gene and the 35S terminator was constructed. Transformation of immature wheat embryos with phmw-adc(+) was accomplished by particle bombardment. Seeds from the transgenic wheat line 787.9.1 (Cadenza variety) showed generally increased levels of the different polyamines as compared to the levels of polyamines in seeds of the control plants, with the increase in putrescine levels being the most dramatic. Seeds of the transgenic wheat line 832.4.2 and 832.4.3 (Imp variety) also showed increased levels of the different polyamines as compared to seeds of control plants.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:144998 CAPLUS

DOCUMENT NUMBER: 132:204841

TITLE: Methyltransferase in the synthesis of betaine from glycine, nucleic acid molecules encoding the methyltransferases, and their recombinant expression and uses

INVENTOR(S): Reinikainen, Tapani; Nyysola, Antti; Kerovuo, Janne

PATENT ASSIGNEE(S): Cultor Corporation, Finland

SOURCE: PCT Int. Appl., 176 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000011142	A2	20000302	WO 1999-EP6037	19990818
WO 2000011142	A3	20000622		
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 9957364	A1	20000314	AU 1999-57364	19990818
EP 1112352	A2	20010704	EP 1999-944425	19990818
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			

PRIORITY APPLN. INFO.: US 1998-137434 A 19980820  
WO 1999-EP6037 W 19990818

AB The present invention relates to proteins which are capable of functioning as methyltransferases. More, specifically, the present invention relates to methyltransferases from Actinopolyspora halophila and Ectothiorhodospira halochloris which are capable of carrying out at least one of the following reactions: the conversion of glycine to sarcosine, sarcosine to dimethylglycine and dimethylglycine to betaine in the presence of a Me group donor. The betaine operons of these two organisms also contain the gene encoding **S-adenosylmethionine synthase**. Furthermore, the present invention relates to nucleic acid mols. encoding such methyltransferase proteins, recombinant organisms which are capable of expressing said nucleic acids as well as the use of said recombinant organisms.

L16 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:116075 CAPLUS

DOCUMENT NUMBER: 132:304134

TITLE: The complete **sequence** of a heterochromatic island from a higher eukaryote

AUTHOR(S): McCombie, W. Richard; De la Bastide, Melissa; Habermann, Kristina; Parnell, Laurence; Dedhia, Neilay; Gnoj, Lidia; Schutz, Kristin; Huang, Emily; Spiegel, Lori; Yordan, Cristy; Sehkun, Mundeep; Murray, Jennifer; Sheet, Paul; Cordes, Matt; Threideh, Jane; Stoneking, Tamberlyn; Kalicki, Joelle; Graves, Tina; Harmon, Gwen; Edwards, Jennifer; Latreille, Phil; Courtney, Laura; Cloud, James; Abbott, Amanda; Scott, Kelsi; Johnson, Doug; Minx, Pat; Bentley, Dan; Fulton, Bob; Miller, Nancy; Greco, Tracie; Kemp, Kim; Kramer, Jason; Fulton, Lucinda; Mardis, Elaine; Dante, Mike; Pepin, Kym; Hillier, LaDeana; Nelson, Joanne; Spieth, John; Simorowski, Joe; May, Bruce; Ma, Peter; Preston, Ray; Vil, Daniel; See, Lei Hoon; Shekher, Monica; Matero, Anthony; Shah, Ravi; Swaby, I'Kyori; O'Shaughnessy, Andrew; Rodriguez, Milka; Hoffman, Jane; Till, Sally; Granat, Susan; et al.

CORPORATE SOURCE: Cold Spring Harbor Laboratory, Lita Annenberg Hazen Genome Center, Cold Spring Harbor, NY, 11724, USA

SOURCE: Cell (Cambridge, Mass.) (2000), 100(3), 377-386

CODEN: CELLB5; ISSN: 0092-8674

PUBLISHER: Cell Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Heterochromatin, constitutively condensed chromosomal material, is widespread among eukaryotes but incompletely characterized at the nucleotide level. We have **sequenced** and analyzed 2.1 megabases (Mb) of Arabidopsis thaliana chromosome 4 that includes 0.5-0.7 Mb of isolated heterochromatin that resembles the chromosomal knobs described by Barbara McClintock in **maize**. This isolated region has a low d. of expressed genes, low levels of recombination and a low incidence of gene trap insertion. Satellite repeats were absent, but tandem arrays of long repeats and many transposons were found. Methylation of these **sequences** was dependent on chromatin remodeling. Clustered repeats were assocd. with condensed chromosomal domains elsewhere. The complete **sequence** of a heterochromatic island provides an opportunity to study **sequence** determinants of chromosome condensation.

REFERENCE COUNT: 90 THERE ARE 90 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:806766 CAPLUS

DOCUMENT NUMBER: 130:49186

TITLE: Plant amino acid biosynthetic enzymes and their gene DNA **sequences**

INVENTOR(S): Falco, Saverio Carl; Allen, Stephen M.; Rafalski, J. Antoni; Hitz, William D.; Kinney, Anthony John; Abell, Lynn Marie; Thorpe, Catherine Jane

PATENT ASSIGNEE(S): E.I. Du Pont de Nemours and Co., USA

SOURCE: PCT Int. Appl., 98 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9855601.	A2	19981210	WO 1998-US11692	19980605
WO 9855601	A3	19990304		
W:	AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9877270	A1	19981221	AU 1998-77270	19980605
EP 979296	A2	20000216	EP 1998-925282	19980605
R:	DE, FR, GB, IT			
BR 9809967	A	20000801	BR 1998-9967	19980605
PRIORITY APPLN. INFO.:			US 1997-48771	P 19970606
			US 1997-49443	P 19970612
			US 1997-48774	P 19970606
			WO 1998-US11692	W 19980605

AB This invention relates to an isolated nucleic acid fragment encoding a plant enzyme that catalyzes steps in the biosynthesis of lysine, threonine, methionine, cysteine and isoleucine from aspartate, the enzyme a member selected from the group consisting of: dihydrodipicolinate reductase, diaminopimelate epimerase, threonine synthase, threonine deaminase and S-adenosylmethionine synthetase. The invention also relates to the construction of a chimeric gene encoding all or a portion of the enzyme, in sense or antisense orientation, wherein expression of the chimeric gene results in prodn. of altered levels of the enzyme in a transformed host cell.

L16 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:719572 CAPLUS

DOCUMENT NUMBER: 126:3385

TITLE: The **maize** two-dimensional gel protein database: towards an integrated genome analysis program

AUTHOR(S): Touzet, P.; Riccardi, F.; Morin, C.; Damerval, C.; Huet, J. -C.; Pernollet, J. -C.; Zivy, M.; De Vienne, D.

CORPORATE SOURCE: Station de Genetique Vegetale, INRA/UPS/INA, Gif-sur-Yvette, 91190, Fr.

SOURCE: Theor. Appl. Genet. (1996), 93(5-6), 997-1005  
CODEN: THAGA6; ISSN: 0040-5752

PUBLISHER: Springer

DOCUMENT TYPE: Journal

LANGUAGE: English

AB This paper describes the first **maize** database of **proteins** sep'd. by two-dimensional electrophoresis. Fifty-six coleoptile **proteins** and 18 leaf **proteins** from two **maize** lines were partially microsequenced. Thirty-six **proteins** (49%) displayed high similarity with database **proteins**. Nine of these **proteins**, representing five different functions, had never been described in **maize**. No conclusive function could be found for 45 polypeptides (61% of the microsequenced **proteins**). In addn., an alternative identification method, based on **amino acid** anal., allowed candidates to be proposed for 17 **proteins** out of 44 addnl. **proteins** analyzed in the coleoptiles. These results are stored in a database which also includes, when available, genetic information about the chromosomal location of structural genes and regulatory factors of **proteins**. This database is being used in the context of a project on the genetic mapping of the expressed genome in **maize**.

L16 ANSWER 6 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
ACCESSION NUMBER: 1981:179809 BIOSIS  
DOCUMENT NUMBER: BA71:49801  
TITLE: HEPATIC ENZYME ACTIVITIES AND MUSCLE NUCLEIC-ACID CONTENT  
IN SWINE FED A DIET IMBALANCED BY METHIONINE EXCESS FOR 100  
DAYS.  
AUTHOR(S): FAU D; DELHOMME B; BOURDON D; RERAT A  
CORPORATE SOURCE: CENTRE DE RECHERCHES SUR LA NUTRITION, C.N.R.S., 92190  
MEUDON-BELLEVUE.  
SOURCE: C R HEBD SEANCES ACAD SCI SER D SCI NAT, (1980 (RECD 1981))  
291 (6), 565-568.  
CODEN: CHDDAT. ISSN: 0567-655X.  
FILE SEGMENT: BA; OLD  
LANGUAGE: French

AB Twelve growing swine were fed an 18% **protein** diet (maize and soybean) for 100 days containing 0.6% S **amino acids** (basal diet), or 0.6 and 1% DL-methionine added to the control diet. The excess reduced food intake and body wt gain mainly during the finishing period (60-100 kg). The RNA:DNA and **protein**:  
DNA ratios in the muscle did not show any difference. Hepatic activities of some enzymes involved in glycolysis, gluconeogenesis and **amino acid** metabolism, were unchanged except that of methionine adenosyl transferase, the 1st step of transsulfuration, which was induced in proportion with the amount of the methionine ingested. Swine seemed to adapt to the excessive methionine intake, which did not show any toxicity in the experimental conditions.

L16 ANSWER 7 OF 8 SCISEARCH COPYRIGHT 2002 ISI (R)  
ACCESSION NUMBER: 1998:853989 SCISEARCH  
THE GENUINE ARTICLE: 134RT  
TITLE: Gene discovery in the wood-forming tissues of poplar:  
Analysis of 5,692 expressed **sequence** tags  
AUTHOR: Sterky F; Regan S; Karlsson J; Hertzberg M; Rohde A;  
Holmberg A; Amini B; Bhalerao R; Larsson M; Villarroel R;  
VanMontagu M; Sandberg G; Olsson O; Teeri T T; Boerjan W;  
Gustafsson P; Uhlen M; Sundberg B; Lundberg J (Reprint)  
CORPORATE SOURCE: SWEDISH UNIV AGR SCI, DEPT FOREST GENET & PLANT PHYSIOL,  
SE-90183 UMEA, SWEDEN (Reprint); SWEDISH UNIV AGR SCI,  
DEPT FOREST GENET & PLANT PHYSIOL, SE-90183 UMEA, SWEDEN;  
ROYAL INST TECHNOL, KUNGL TEKNISKA HOGSKOLAN, DEPT  
BIOTECHNOL, SE-10044 STOCKHOLM, SWEDEN; UMEA UNIV, DEPT  
PLANT PHYSIOL, SE-90187 UMEA, SWEDEN; STATE UNIV GHENT,  
FLANDERS INTERUNIV INST BIOTECHNOL, DEPT GENET, GENET LAB,  
B-9000 GHENT, BELGIUM; UNIV GOTHENBURG, LUNDBERG LAB, DEPT  
CELL & MOL BIOL, SE-40530 GOTHENBURG, SWEDEN  
COUNTRY OF AUTHOR: SWEDEN; BELGIUM  
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE  
UNITED STATES OF AMERICA, (27 OCT 1998) Vol. 95, No. 22,  
pp. 13330-13335.  
Publisher: NATL ACAD SCIENCES, 2101 CONSTITUTION AVE NW,  
WASHINGTON, DC 20418.  
ISSN: 0027-8424.  
DOCUMENT TYPE: Article; Journal  
FILE SEGMENT: LIFE  
LANGUAGE: English  
REFERENCE COUNT: 40

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB A rapidly growing area of genome research is the generation of expressed **sequence** tags (ESTs) in which large numbers of randomly selected cDNA clones are partially **sequenced**. The collection of ESTs reflects the level and complexity of gene expression in the sampled tissue. To date, the majority of plant ESTs are from nonwoody

plants such as Arabidopsis, Brassica, **maize**, and rice. Here, we present a large-scale production of ESTs from the wood-forming tissues of two poplars, *Populus tremula* L, x *tremuloides* Michx, and *Populus trichocarpa* 'Trichobel.' The 5,692 ESTs analyzed represented a total of 3,719 unique transcripts for the two cDNA libraries. Putative functions could be assigned to 2,245 of these transcripts that corresponded to 820 protein functions. Of specific interest to forest biotechnology are the 4% of ESTs involved in various processes of cell wall formation, such as lignin and cellulose synthesis, 5% similar to developmental regulators and members of known signal transduction pathways, and 2% involved in hormone biosynthesis. An additional 12% of the ESTs showed no significant similarity to any other DNA or protein **sequences** in existing databases. The absence of these **sequences** from public databases may indicate a specific role for these proteins in wood formation. The cDNA libraries and the accompanying database are valuable resources for forest research directed toward understanding the genetic control of wood formation and future endeavors to modify wood and fiber properties for industrial use.

L16 ANSWER 8 OF 8 SCISEARCH COPYRIGHT 2002 ISI (R)  
ACCESSION NUMBER: 91:265899 SCISEARCH  
THE GENUINE ARTICLE: FK184  
TITLE: TRANSIENT OCCURRENCE OF EXTRACHROMOSOMAL DNA OF AN  
ARABIDOPSIS-THALIANA TRANSPOSON-LIKE ELEMENT, TAT1  
AUTHOR: PELEMAN J; COTTYN B; VANCAMP W; VANMONTAGU M (Reprint);  
INZE D  
CORPORATE SOURCE: STATE UNIV GHENT, GENET LAB, B-9000 GHENT, BELGIUM  
COUNTRY OF AUTHOR: BELGIUM  
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE  
UNITED STATES OF AMERICA, (1991) Vol. 88, No. 9, pp.  
3618-3622.  
DOCUMENT TYPE: Article; Journal  
FILE SEGMENT: LIFE  
LANGUAGE: ENGLISH  
REFERENCE COUNT: 27

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB Analysis of 11 genomic clones containing the S-  
**adenosylmethionine synthetase 1** gene (sam1) of  
Arabidopsis thaliana revealed the presence of a 431-base-pair (bp)  
insertion in the 3' end of sam1 in one of these clones. The inserted  
**sequence**, called Tat1, shows structural features of a transposon.  
It is flanked by a 5-bp duplication of the target site DNA and has 13-bp  
inverted repeats at its termini. Two highly homologous elements situated  
in a different genomic context were isolated from a genomic library.  
Genomic Southern analysis indicates that there are at least four copies of  
Tat1 present in the A. thaliana ecotype Columbia genome. Different  
hybridization patterns are observed with DNAs derived from different  
ecotypes of Arabidopsis thaliana, indicating that the element has moved  
since the divergence of these ecotypes. In two populations of A.  
thaliana, linear extrachromosomal Tat1-homologous DNA has been observed.  
The presented data are consistent with the hypothesis that Tat1 is an  
active transposable element.

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GENBANK (R) IS A REGISTERED TRADEMARK OF THE U.S. DEPARTMENT  
OF HEALTH AND HUMAN SERVICES.

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

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provided & its complement*

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OR GLYCINE MAX OR SOYBEAN# OR SOY BEAN#)  
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NUCLEIC ACID COUNT (NA): 309 a 329 c 330 g 342 t  
REFERENCE: 1 (bases 1 to 1310)  
AUTHOR (AU): Riera,M.; Peracchia,G.; de Nadal,E.; Arinyo,J.;  
Pages,M.  
TITLE (TI): Maize Protein Kinase CK2: Regulation and functionality  
of three beta regulatory subunits  
JOURNAL (SO): Plant J. (2001) In press  
REFERENCE: 2 (bases 1 to 1310)  
AUTHOR (AU): Riera,M.  
TITLE (TI): Direct Submission  
JOURNAL (SO): Submitted (01-MAR-2000) Molecular Genetics, CID-CSIC,  
Jordi Girona 18-26, Barcelona 08034, Spain

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L25 ANSWER 2 OF 2 GENBANK.RTM. COPYRIGHT 2002

LOCUS (LOC): ZMACOAC GenBank (R)  
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DIVISION CODE (CI): Plants, fungi, algae  
DATE (DATE): 31 May 1996  
DEFINITION (DEF): Z.mays mRNA for acetyl CoA carboxylase (partial).  
KEYWORDS (ST): acetyl CoA carboxylase  
SOURCE: Zea mays.  
ORGANISM (ORGN): Zea mays  
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Poales; Poaceae; PACC clade; Panicoideae;  
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NUCLEIC ACID COUNT (NA): 1510 a 995 c 1298 g 1477 t

## COMMENT:

On Apr 18, 1996 this sequence version replaced gi:460820.

REFERENCE: 1 (bases 1 to 5280)  
AUTHOR (AU): Ashton, A.R.; Jenkins, C.L.; Whitfeld, P.R.  
TITLE (TI): Molecular cloning of two different cDNAs for maize  
acetyl CoA carboxylase  
JOURNAL (SO): Plant Mol. Biol., 24 (1), 35-49 (1994)

OTHER SOURCE (OS): CA 120:237394  
REFERENCE: 2 (bases 1 to 5280)  
AUTHOR (AU): Ashton,A.R.  
TITLE (TI): Direct Submission  
JOURNAL (SO): Submitted (14-JUL-1993) Ashton A. R., CSIRO, Division  
of Plant Industry, Canberra, ACT, AUSTRALIA, 2601  
REFERENCE: 3 (bases 1 to 5280)  
AUTHOR (AU): Ashton,A.R.  
TITLE (TI): Direct Submission  
JOURNAL (SO): Submitted (14-MAR-1994) Ashton A. R., CSIRO, Division  
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TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
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=> s methionine adenosyltransferase  
L1 1429 METHIONINE ADENOSYLTRANSFERASE

=> s corn or maize  
L2 244548 CORN OR MAIZE

=> s l1 and l2  
L3 1 L1 AND L2

=> s soybean  
L4 165111 SOYBEAN

=> s l1 and l4  
L5 1 L1 AND L4

=> d ibib abs l3

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 1998:806766 CAPLUS  
DOCUMENT NUMBER: 130:49186  
TITLE: Plant amino acid biosynthetic enzymes and their gene  
DNA sequences  
INVENTOR(S): Falco, Saverio Carl; Allen, Stephen M.; Rafalski, J.  
Antoni; Hitz, William D.; Kinney, Anthony John; Abell,  
Lynn Marie; Thorpe, Catherine Jane  
PATENT ASSIGNEE(S): E.I. Du Pont de Nemours and Co., USA  
SOURCE: PCT Int. Appl., 98 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9855601	A2	19981210	WO 1998-US11692	19980605
WO 9855601	A3	19990304		

W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GW,  
HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG,  
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AU 9877270 A1 19981221 AU 1998-77270 19980605

EP 979296 A2 20000216 EP 1998-925282 19980605

R: DE, FR, GB, IT

BR 9809967 A 20000801 BR 1998-9967 19980605

PRIORITY APPLN. INFO.:

US 1997-48771 P 19970606

US 1997-49443 P 19970612

US 1997-48774 P 19970606

WO 1998-US11692 W 19980605

AB This invention relates to an isolated nucleic acid fragment encoding a plant enzyme that catalyzes steps in the biosynthesis of lysine, threonine, methionine, cysteine and isoleucine from aspartate, the enzyme a member selected from the group consisting of: dihydrodipicolinate reductase, diaminopimelate epimerase, threonine synthase, threonine deaminase and S-adenosylmethionine synthetase. The invention also relates to the construction of a chimeric gene encoding all or a portion of the enzyme, in sense or antisense orientation, wherein expression of the chimeric gene results in prodn. of altered levels of the enzyme in a transformed host cell.

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AU 9877270	A1	19981221	AU 1998-77270	19980605
EP 979296	A2	20000216	EP 1998-925282	19980605
R: DE, FR, GB, IT				
BR 9809967	A	20000801	BR 1998-9967	19980605

PRIORITY APPLN. INFO.: US 1997-48771 P 19970606  
 US 1997-49443 P 19970612  
 US 1997-48774 P 19970606  
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=> d ibib abs 15

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Table  
2

T<sub>6</sub>ur

T<sub>6</sub>ur

Methionine

T<sub>6</sub>ur

Methionine

Methionine

Adenosylhomocysteine

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